BUILDING TRUST

PRODUCT DATA SHEET

Sikadur®-30 LP

Thixotropic adhesive for bonding reinforcement

DESCRIPTION

Sikadur®-30 LP is a thixotropic, structural 2-part adhesive, based on a combination of epoxy resins and especially designed for use at higher temperatures between +25 °C and +55 °C.

USES

Sikadur®-30 LP may only be used by experienced professionals.

Suitable for structural strengthening (Principle 4, Method 4.3 of EN 1504-9). Increasing the bearing capacity of the concrete structure by bonding plate reinforcement.
Adhesive for bonding structural reinforcement, particularly in structural strengthening works. Especially for the following uses:

- Sika® CarboDur® Plates to concrete, brickwork, timber and steel (for details see the Sika® CarboDur® Product Data Sheet, 850 41 05 Method Statement Sika® CarboDur® System and 850 41 07 Method Statement Sika CarboDur® NSM Reinforcement).
- Steel plates to concrete.

Please note:
The Product may only be used by experienced professionals.

CHARACTERISTICS / ADVANTAGES

- Long pot life
- Very good temperature resistance at elevated curing temperatures
- Easy to mix and apply
- No primer required
- Very good creep resistance under permanent load
- Very good adhesion to concrete, masonry, stonework, steel, cast iron, timber and Sika® CarboDur® Plates
- Hardening is not affected by high humidity
- High strength adhesive
- Thixotropic: non-sag in vertical and overhead applications
- Hardens without shrinkage
- Differently coloured components for mixing control
- Very good initial and ultimate mechanical resistance
- Very good abrasion and shock resistance
- Impermeable to liquids

ENVIRONMENTAL INFORMATION

- Contributes towards satisfying Materials and Resources (MR) Credit: Building product disclosure and optimization — Environmental Product Declarations under LEED® v4
- Contributes towards satisfying Materials and Resources (MR) Credit: Building Product Disclosure and Optimization — Material Ingredients under LEED® v4
- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)

APPROVALS / STANDARDS

- European Technical Assesment 21/0276 30/06/2021 EN
- CE marking and declaration of performance based on EN 1504-4:2004 Products and systems for the protection and repair of concrete structures — Structural bonding
- National Technical Assessment Sika CarboDur® kit, ITB, Approval No. ITB-KOT-2018/0414 v.2
- Technical Approval Sika CarboDur, Nr. IBDiM-KOT-2019-0361 v.2
- Technical Agreement, CTPC, No. 016-01/488-2022

PRODUCT INFORMATION

Chemical Base	Epoxy resin	
Packaging	6 kg (A+B)	Pre-batched unit
	Refer to the current price list for available packaging variations.	
Colour	Part A	white
	Part B	black
	Part A + B mixed	light grey
Shelf Life	24 months from date of production	
Storage Conditions	Store in original, unopened, sealed and undamaged packaging in dry conditions at temperatures between +5 °C and +30 °C. Protect from direct sunlight. Refer to the current Safety Data Sheet for information on safe handling and storage.	
Density	Parts A + B mixed at +23 °C	(1.98 ±0.1) kg/l

TECHNICAL INFORMATION

Compressive Strength (EN 196-1)

Curing time	+25 °C	+55 °C
12 hours	–	90 N/mm²
1 day	75 N/mm²	100 N/mm²
3 days	85 N/mm²	110 N/mm²

(EAD 160086-00-0301)

Curing conditions	Mean Value	Characteristic
3 days at 21 °C	78 N/mm²	76 N/mm²
7 days at 21 °C	85 N/mm²	84 N/mm²
21 days at 21 °C	85 N/mm²	84 N/mm²
42 days at 21 °C	85 N/mm²	84 N/mm²

Modulus of Elasticity in Compression (ASTM D695)

Cured at +25 °C	10 000 N/mm²

Tensile Strength in Flexure (EN 196-1)

Curing time	+25 °C	+55 °C
1 day	12 N/mm²	38 N/mm²
3 days	20 N/mm²	40 N/mm²
7 days	25 N/mm²	42 N/mm²

(EAD 160086-00-0301)

Curing conditions	Mean Value	Characteristic
3 days at 21 °C	28 N/mm²	26 N/mm²
7 days at 21 °C	35 N/mm²	33 N/mm²
21 days at 21 °C	35 N/mm²	34 N/mm²
42 days at 21 °C	35 N/mm²	34 N/mm²

Tensile Strength (EN ISO 527-2)

Curing time	+25 °C	+55 °C
1 day	–	26 N/mm²
3 days	14 N/mm²	28 N/mm²
7 days	17 N/mm²	28 N/mm²

Modulus of Elasticity in Tension (EN ISO 527-2)

Cured at +25 °C	10 000 N/mm²

Shear Strength (FIP/9/2:1978 5.15)

Curing time	+44 °C to +55 °C
7 days	19 N/mm²

(DIN EN 1465)

Curing time	+25 °C	+80 °C
> 1 hour	–	17 N/mm²
7 days	7 N/mm²	–

Shrinkage 0.04 % (FIP/9/2:1978 5.7)

Tensile Adhesion Strength (EN ISO 4624)

Curing time	Substrate	+25 °C	+55 °C
1 day	Concrete	>4 N/mm² (Concrete failure)	>4 N/mm² (Concrete failure)
1 day	Steel	15 N/mm²	25 N/mm²
3 days	Steel	22 N/mm²	28 N/mm²

Coefficient of Thermal Expansion (EN 1770)

Temperature range: −20 °C to +40 °C	2.5×10^{-5} 1/K

Service Temperature

Cured at > +23 °C	−40 °C to +45 °C
Cured > 2 hours at +80 °C After cure at +80 °C wait 7 days for full cure	−40 °C to +72 °C

Glass Transition Temperature (EN 12614)

Curing conditions	Tg
3 days at +23°C and 1 day at +80 °C	+90 °C
3 days at +23°C and 1 day at +50 °C	+80 °C
30 days at +30°C	+70 °C

Heat Deflection Temperature (FIP/9/2:1978 5.10 ; ASTM D648)

Curing time	Curing temperature	HDT
2 hours	+80 °C	+84 °C
7 days	+55 °C	+82 °C
7 days	+23 °C	+55 °C

APPLICATION INFORMATION

Mixing Ratio

Part A : Part B	3 : 1 by weight or volume

Only mix complete pre-batched units.

Layer Thickness

30 mm max.

Sag Flow (FIP/9/2:1978 5.3)

On vertical surfaces it is non-sag up to 3–5 mm thickness at +55 °C.

Product Temperature

Maximum	+40 °C
Minimum	+20 °C

Ambient Air Temperature

Minimum	+25 °C
Maximum	+55 °C

Dew Point

Beware of condensation.
Substrate temperature during application must be at least 3 °C above dew point.

Substrate Temperature

Minimum	+25 °C
Maximum	+55 °C

Substrate Moisture Content

Max. 4 % pbw
When applied to mat damp concrete, brush the adhesive well into the substrate.

Pot Life (FIP/9/2:1978 5.1)

Temperature	Pot life	Open time
+25 °C	90 minutes	120 minutes
+55 °C	30 minutes	60 minutes

The pot life begins when the resin and hardener are mixed. It is shorter at high temperatures and longer at low temperatures. The greater the quantity mixed, the shorter the pot life. To obtain longer workability at high

	temperatures, the mixed adhesive may be divided into portions. Another method is to chill components A+B before mixing them (not below +5 °C).	
Squeezability	5 500 mm² at +25 °C at 15 kg	(FIP/9/2:1978 5.4)

SYSTEM INFORMATION

System Structure	Sika® CarboDur® System: For Application Details of Sika® CarboDur® plates with Sikadur®-30 LP, reference must be made to the Sika® Method Statements: ▪ 850 41 05 Method Statement Sika® CarboDur® System ▪ 850 41 07 Method Statement Sika CarboDur® NSM Reinforcement

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LIMITATIONS

- Sikadur® resins are formulated to have low creep under permanent loading. However, due to the creep behavior of all polymer materials under load, the long term structural design load must account for creep. Generally the long term structural design load must be lower than ¼ to ⅕ of the failure load. A structural engineer must be consulted for load calculations for the specific application.

ECOLOGY HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

See the Product Data Sheet of Sika® CarboDur® Plates and Sika® CarboDur® BC rods.

SUBSTRATE PREPARATION

Reference must be made to the Sika® Method Statements:
- 850 41 05 Method Statement Sika® CarboDur® System
- 850 41 07 Method Statement Sika CarboDur® NSM Reinforcement

MIXING

PRE-BATCHED UNITS
1. IMPORTANT Mix full units only. Prior to mixing all parts, mix part A (resin) briefly using a mixing spindle attached to a slow-speed electric mixer (max. 300 rpm).
2. Add part A to part B (hardener) and mix parts A+B continuously for at least 3 minutes until a uniformly coloured, smooth consistency mix has been achieved.
3. IMPORTANT Do not overmix. To ensure thorough mixing, pour materials into a clean container and mix again for approximately 1 minute. Mixing time for A+B = 4 minutes.

APPLICATION

Reference must be made to the Sika® Method Statements:
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CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Colma Cleaner immediately after use. Hardened material can only be removed mechanically.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

Sika Pakistan (Pvt.) Limited
141-CCA Phase IV, DHA
Lahore Punjab 54792
Pakistan
phone: +92 42 3569 4266 - 67
fax: +92 42 3569 4268
http://pak.sika.com/